AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A method of producing p-type Group III nitride compound semiconductor, comprising ~~steps of~~:

forming a first Group III nitride compound semiconductor layer doped with p-type impurities;

forming a second Group III nitride compound semiconductor layer doped with substantially at least one of ~~(i)~~ no impurities, ~~(ii)~~ n-type impurities, and ~~(iii)~~ n-type and p-type impurities, such that an amount of impurities in said second Group III nitride compound semiconductor layer is less than an amount of impurities in said first Group III nitride compound semiconductor layer; and

reducing resistance after or during said ~~the step of~~ forming said second Group III nitride compound semiconductor layer.

2. (Currently amended) A method of producing p-type Group III nitride compound semiconductor according to claim 1, further comprising: ~~a step of~~

removing said second Group III nitride compound semiconductor layer after or during said reducing said resistance ~~the step of~~ reducing resistance.

3. (Original) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said second Group III nitride compound semiconductor layer has a thickness selected to be in a range of from 1 nm to 100 nm, both inclusively.

4. (Currently amended) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein ~~an amount of p-type impurities added to~~ said second Group III nitride compound semiconductor layer comprises a thickness which is not less than 1nm ~~is smaller than an amount of p-type impurities added to said first Group III nitride compound semiconductor layer~~.

5. (New) A method of producing p-type Group III nitride compound semiconductor

according to claim 1, wherein said reducing said resistance comprises promoting a diffusion of said p-type impurities in said first Group III nitride compound semiconductor layer to diffuse from interstitial sites in said first Group III nitride compound semiconductor layer.

6. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said reducing said resistance comprises promoting a diffusion of said p-type impurities to diffuse from interstitial sites in said first Group III nitride compound semiconductor layer to said second Group III nitride compound semiconductor layer.

7. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, said reducing said resistance comprises desorbing said p-type impurities from said first Group III nitride compound semiconductor layer.

8. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said p-type impurities comprise at least one of magnesium, zinc, beryllium, calcium, strontium and barium.

9. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said n-type impurities comprise at least one of silicon, germanium, carbon, selenium and tellurium.

10. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said reducing said resistance comprises performing a heat treatment using one of electron beam irradiation, laser beam irradiation and oven heating.

11. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 10, wherein said heat treatment is performed in one of a vacuum and a hydrogen-free atmosphere.

12. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 11, wherein said heat treatment comprises heat treating at a temperature of at least 350°C.

13. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein said forming said first and second Group III nitride compound semiconductor layers comprises sequentially depositing said first and second Group III nitride compound semiconductor layers in a reaction chamber.

14. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 13, wherein said forming said second Group III nitride compound semiconductor layer comprises introducing an n-type impurity source gas to said reaction chamber.

15. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 13, wherein said forming said second Group III nitride compound semiconductor layer comprises introducing an n-type impurity source gas and a p-type impurity source gas to said reaction chamber.

16. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 13, further comprising:

removing said first and second Group III nitride compound semiconductor layers from said reaction chamber, and subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment of greater than 350°C.

17. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 13, further comprising:

subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment of greater than 350°C without removing said first and second Group III nitride compound semiconductor layers from said reaction chamber.

18. (New) A method of producing p-type Group III nitride compound semiconductor

according to claim 17, wherein said subjecting said first and second Group III nitride compound semiconductor layers to a heat treatment comprises thermally decomposing said second Group III nitride compound semiconductor layer.

19. (New) A method of producing p-type Group III nitride compound semiconductor according to claim 1, wherein a thickness of said second Group III nitride compound semiconductor layer is no greater than 100nm.

20. (New) A method of forming a light-emitting diode, comprising:

forming a first Group III nitride compound semiconductor layer doped with p-type impurities;

forming a second Group III nitride compound semiconductor layer on said first Group III nitride compound semiconductor layer such that an amount of impurities in said second Group III nitride compound semiconductor layer is less than an amount of impurities in said first Group III nitride compound semiconductor layer; and

after a beginning of said forming said second Group III nitride compound semiconductor layer, performing a heat treatment to reduce an electrical resistivity of said first Group III nitride compound semiconductor layer.